

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

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SPORTVISION, INC. and SPORTSMEDIA  
TECHNOLOGY CORPORATION,

Plaintiffs,

v.

MLB ADVANCED MEDIA, LP,

Defendant.

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: No. 18-cv-03025 (PGG)  
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**PLAINTIFFS SPORTVISION, INC. AND SPORTSMEDIA TECHNOLOGY  
CORPORATION’S RESPONSE TO DEFENDANT MLB ADVANCED MEDIA, L.P.’S  
SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF REGARDING  
“THREE DIMENSIONAL VOLUME”**

**TABLE OF CONTENTS**

I.	Introduction.....	1
II.	Legal Principles .....	2
III.	“Three Dimensional Volume” Is A “Space Defined In Three Dimensions” .....	2
IV.	The Intrinsic Evidence Supports Plaintiffs’ Construction .....	4
	A.    The Claim Language And Specification.....	4
	B.    The File History .....	7
V.	Extrinsic Evidence Supports Plaintiffs’ construction .....	8
VI.	The Court Should Recognize That It Is MLBAM That Seeks To Rewrite The Claims .....	10
VII.	Conclusion .....	10

# **TABLE OF AUTHORITIES**

	<b>Page(s)</b>
<b>CASES</b>	
<i>Markman v. Westview Inst. Inc.</i> , 517 U.S. 371 (1996) .....	1, 2
<i>Nichia Corp. v. Everlight Ams., Inc.</i> , 855 F.3d 1328 (Fed. Cir. 2017) .....	5
<i>On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH</i> , 386 F.3d 1133 (Fed. Cir. 2004) .....	1
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) .....	2
<i>SAS Inst., Inc. v. ComplementSoft, LLC</i> , 825 F.3d 1341 (Fed. Cir. 2016), rev'd on other grounds, <i>SAS Inst., Inc. v. Iancu</i> , 138 S. Ct. 1348 (2018) .....	5, 6
<i>SimpleAir, Inc. v. Sony Ericsson Mobile Communs. AB</i> , 820 F.3d 419 (Fed. Cir. 2016) .....	4, 6
<i>Vitronics Corp. v. Conceptiontronic</i> , 90 F.3d 1576 (Fed. Cir. 1996) .....	2

## I. INTRODUCTION

The parties agree that the patentee used “three dimensional volume” in accordance with its plain and ordinary meaning. Because the parties dispute what that plain and ordinary meaning is in the context of U.S. Patent 7,341,530 (the “’530 Patent”), the Court must resolve that dispute. *Markman v. Westview Inst. Inc.*, 517 U.S. 371, 391 (1996). In light of the parties’ agreement, the Court asked the parties to provide supplemental briefing about that plain and ordinary meaning.

Plaintiffs contend that the plain and ordinary meaning of “three dimensional volume” as used in the ’530 Patent is a “space defined in three dimensions.” This construction is consistent with the embodiment disclosed in the ’530 Patent, in which the “three dimensional volume” is a three dimensional “box” or “zone” defined by its dimensions with four sides, a top, and a bottom. (’530 Patent at 3:21-28, Fig. 3.) This construction is also consistent with the claim language, the file history, and the understanding of those skilled in the art.

To its credit, MLBAM has now disavowed its untenable position that “three dimensional volume” is a numeric calculation of the “amount of space occupied by a three dimensional object.” That concept is not found in the ’530 Patent and is nonsensical in the context of the claims. In its supplemental briefing, MLBAM now takes an entirely different course that largely adopts Plaintiffs’ proposed construction. But in doing so, MLBAM rewrites the term to add new limitations previously absent in the claim language that it believes will help its litigation position. MLBAM’s proposed additions are not compatible with the claim language and would exclude the preferred embodiment, which the Federal Circuit has warned “is rarely, if ever, correct.” *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH*, 386 F.3d 1133, 1138 (Fed. Cir. 2004).

MLBAM’s shifting positions are part of a transparent effort to create a non-infringement position for its accused products. It can only make these dramatic shifts because its positions are untethered to any evidence of how a person of skill in the art would understand the claim terms.

Federal Circuit claim construction principles preclude such an approach. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (“Claims generally receive their ordinary and customary meaning as understood by a person of ordinary skill in the art.”) MLBAM’s reliance on dictionary definitions and attorney argument, while ignoring the preferred embodiment detailed in the specification, is legally insufficient to determine how a person skilled in the art would understand “three dimensional volume” in light of the specification.

## II. LEGAL PRINCIPLES

The Court must examine claim terms from the perspective of a person of ordinary skill in the art. *Markman*, 52 F.3d at 986 (The focus in construing disputed terms “is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean.”). “Claims generally receive their ordinary and customary meaning as understood by a person of ordinary skill in the art.” *Phillips*, 415 F.3d at 1312-13. The correct construction is one “that stays true to the claim language and most naturally aligns with the patent’s description of the invention.” *Id.* at 1314 (quotation omitted). If all ambiguities are resolved after examining the claims, specification, and file history, then the Court should not resort to extrinsic evidence (*e.g.*, dictionary definitions). *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1584 (Fed. Cir. 1996).

## III. “THREE DIMENSIONAL VOLUME” IS A “SPACE DEFINED IN THREE DIMENSIONS”

The plain and ordinary meaning of the phrase “three dimensional volume” in the context of the ’530 Patent is a “space defined in three dimensions.”<sup>1</sup> This definition captures the parties’

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<sup>1</sup> Plaintiffs’ original proposal used “zone” to clarify that “volume” in this context means a spatial volume—in contrast to MLBAM’s assertion that volume is a numeric calculation of the “amount of space of a three dimensional object.” MLBAM tried to run away from this definition, telling the Court that it never said that volume is a calculated number. (Dkt. 229-2, Hrg. Tr. 23:10-11.) But, an “amount of space” is a calculated number (*length x width x height*), and that is exactly the calculation MLBAM’s counsel asked Dr. Stevenson to perform in his deposition. (Dkt. 177-3, 56:19-57:23.) MLBAM has now disavowed that litigation-driven construction.

agreement that “volume” refers to spatial volume. This definition also derives directly from the specification, which states that the “four sides of the three dimensional box representing the strike zone are *defined* by the dimensions of home plate,” and the bottom and top are defined by the back of the hollow of the batter’s knee and a position above the batter’s belt buckle, respectively. (’530 Patent at 3:21-28 (emphasis added); *see also* Dkt. 142-1 (Stevenson Decl.), ¶ 31.)

The parties agree that the ’530 Patent uses “volume” in its plain and ordinary meaning, but also concede that volume has many meanings in other contexts, such as audio volume, book volume, or amount of space (*e.g.*, cubic inches). Thus, though “three dimensional volume” is clear to those skilled in the art in this context, some clarification for the jury is appropriate. MLBAM has suggested that the word “space” is acceptable, instead of “zone” as proposed by Plaintiffs. The patent uses “box” and “zone,” while the claims use “volume.” In the context of the ’530 Patent, the words “volume,” “box,” “zone,” and “space” all connote a spatial volume to those skilled in the art. (Dkt. 142-1, ¶¶ 31, 32.) Accordingly, Plaintiffs have adopted the word “space” instead of “zone” as a compromise to minimize the issues for the Court to decide.

Having reached agreement that “volume” refers to a spatial volume, Plaintiffs’ construction of “three dimensional volume” flows naturally: “a space defined in three dimensions.” MLBAM, however, seeks to import a new limitation—introducing the concept of a separate “three dimensional object.” MLBAM argues that the “three dimensional volume” is not a defined three dimensional space (as would be the natural reading of the claim), but is a particular space occupied by a separate “three dimensional object.” MLBAM pulls this new limitation from thin air, as the plain and ordinary meaning of three dimensional volume does not even suggest another “object.” Rather, the “three dimensional volume” itself defines the space. For example, the “three dimensional volume” described in the specification is a three dimensional box defined in a computer model by defining four sides, a top, and a bottom. (’530 Patent at 3:22-28.) A person

skilled in the art would understand that the three dimensional box described in the patent is a space defined in three dimensions—consistent with Plaintiffs’ construction. (Dkt. 142-1, ¶ 31.)

MLBAM also errs by conflating the “three dimensional volume” with the “strike zone,” which are two different and separately claimed limitations. For example, MLBAM states: “In the context of the claims of the ’530 Patent, the ‘object’ is the strike zone.” (Dkt. 229 at 2.) By conflating the “three dimensional volume” with the “strike zone,” MLBAM violates two claim construction principles: (1) that all claim terms should be given effect, and (2) that different words in the claims should be given different meanings. *See SimpleAir, Inc. v. Sony Ericsson Mobile Communs. AB*, 820 F.3d 419, 429, 431 (Fed. Cir. 2016). MLBAM provides no evidence that those skilled in the art would understand that the three dimensional volume must be the space occupied by the strike zone. To the contrary, the ’530 Patent claims and specification differentiate between the three dimensional volume and the strike zone, as described in more detail below.<sup>2</sup>

#### IV. THE INTRINSIC EVIDENCE SUPPORTS PLAINTIFFS’ CONSTRUCTION

##### A. The Claim Language And Specification

Plaintiffs’ construction is fully consistent with the claim language. For example, claim 1 recites “determining a three dimensional volume representing a strike zone.” The plain and ordinary meaning proposed by Plaintiffs fits naturally into that claim language: “determining a [space defined in three dimensions] representing a strike zone.”

Plaintiffs’ construction is also consistent with the description in the specification of how to determine the three dimensional volume representing the strike zone:

The four sides of the three dimensional box representing the strike zone are *defined* by the dimensions of home plate. The bottom of

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<sup>2</sup> MLBAM attempts to support its position by mischaracterizing what Plaintiffs’ counsel said in the hearing with the clever use of ellipses. (Dkt. 229 at 2.) Read in full, it is clear that counsel did not agree that “volume” means the “space occupied by the strike zone,” but rather stated that the claimed volume is a “*representation* of that space.” (Dkt. 229-1, Hrg. Tr. 35:1-6.)

the strike zone is set to at the back of the hollow of the batter's knee.  
 [...] The top of the strike zone corresponds to a position  $2\frac{1}{2}$   
 diameters of a baseball above the batter's belt buckle[.]

('530 Patent at 3:21-28 (emphasis added); *see also id.*, Fig. 3 (step 212) (“four sides of **zone** correspond to sides of home plate, bottom of **zone** corresponds to back of knee and top of **zone** corresponds to 2.5 baseballs above belt buckle”) (emphasis added).)

MLBAM argues that the phrase “three dimensional volume representing a strike zone” in claim 1 does not correspond to the “three dimensional box representing a strike zone” described in the specification. (Dkt. 229 at 6.) *First*, the evidence confirms that a person of ordinary skill in the art would understand the three dimensional box described in the specification to be the claimed three dimensional volume—which is the appropriate standard. (Dkt. 142-1, ¶ 31.) MLBAM provides no evidence to the contrary. *Second*, MLBAM does not identify any teaching in the specification that describes another way to determine the three dimensional volume. Based on the evidence, the only conclusion is that the three dimensional volume may be determined in the manner described for the three dimensional box in the specification—by defining its dimensions.

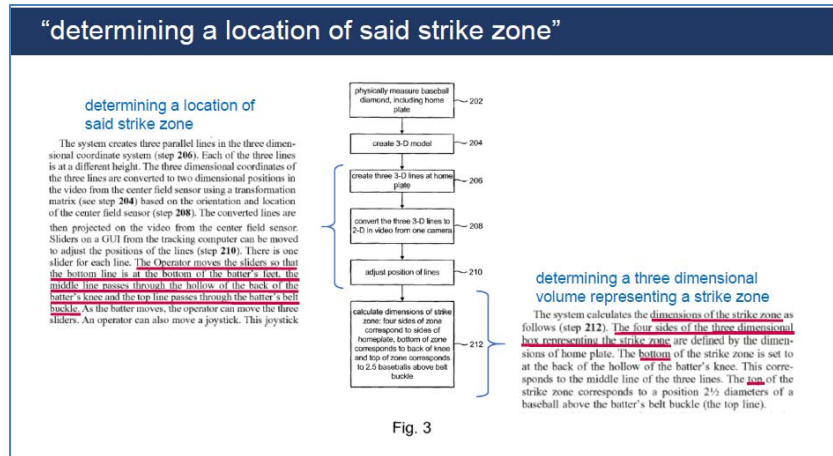
'530 Patent at 3:21-28

MLBAM argues that the use of the phrase “three dimensional volume representing a strike zone” in the claims implies an intent that the phrase have a different meaning than “three dimensional box representing a strike zone” described in the specification. Federal Circuit law refutes MLBAM's argument. The specification need not use the same terms as the claims, and absent a reason to conclude that the patentee meant something different, no difference is implied when the terms are commensurate in scope. *Nichia Corp. v. Everlight Ams., Inc.*, 855 F.3d 1328, 1335-36 (Fed. Cir. 2017); *SAS Inst., Inc. v. ComplementSoft, LLC*, 825 F.3d 1341, 1348 (Fed. Cir. 2016), *rev'd on other grounds, SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018). Here, the

unrebutted evidence confirms that the “three dimensional volume,” “three dimensional box,” and “zone” are commensurate in scope. (Dkt. 142-1, ¶¶ 31, 32.)

As discussed above, MLBAM seeks to rewrite “three dimensional volume” to be “space occupied by a three-dimensional object.” (Dkt. 229 at 2.) It also contends that “the ‘object’ is the strike zone.” (*Id.*) Therefore, though hidden, MLBAM’s construction for “three dimensional volume” is really: “space occupied by the strike zone.” This construction is nonsensical because the “strike zone” is a defined space, not an object. (Dkt. 142-4 (“The Strike Zone is that space over home plate[.]”).) The claim language makes clear that the “three dimensional volume” is not the strike zone. Rather, the “three dimensional volume” **represents** the strike zone. The three dimensional volume cannot *both* be the claimed strike zone (as MLBAM contends) *and* also represent the claimed strike zone. MLBAM’s construction would render the “representing” limitation superfluous, which is improper. *See, e.g., SimpleAir*, 820 F.3d at 429.

Moreover, Claim 2 recites “determining the location of the strike zone” as a separate step from “determining the three dimensional volume representing the strike zone.” This further confirms that the “strike zone” and the “three dimensional volume” are two different and distinct limitations. The specification makes this distinction, explaining that the system creates a three dimensional computer model with a coordinate system that can be used for tracking the baseball, strike zone, and other objects. (’530 Patent at 2:52-60, Fig. 3 (step 204).) The system uses that three dimensional model to determine the location of the strike zone for the current batter. (*Id.* at 2:61-3:20, Fig. 3 (steps 206, 208, 210).) Once the strike zone for that batter is determined, the system then determines a three dimensional volume in the three dimensional model that represents that batter’s strike zone. (*Id.* at 3:21-28, Fig. 3 (step 212).) Thus, the patent differentiates between the strike zone and the three dimensional volume representing the strike zone. This distinction is shown in the figure below:



(May 27, 2021 Hearing Presentation, slide 59.)

Therefore, MLBAM's attempt to conflate the strike zone and the three dimensional volume representing the strike zone is not compatible with the claim language or the specification.

## B. The File History

Plaintiffs' construction is also consistent with the file history. Prior to the December 12, 2006 amendment, claim 1 recited in part: "*indicating whether one of said set of one or more locations of said ball intersects a strike zone.*" (Dkt. 177-8 at 3.) The inventors clarified their invention by amending the claims with the underlined text as follows:

determining a three dimensional volume representing a strike zone;

determining whether one of said one or more locations of said ball intersects the three dimensional zone representing the strike zone; and

indicating whether one of said set of one or more locations of said ball intersects the three dimensional volume representing the [[a]] strike zone.

(Dkt. 177-5 at 2.) This amendment shows that the three dimensional volume representing the strike zone is not the same as the strike zone, because the claim originally required indicating whether the ball intersected the strike zone, but the amended claim requires indicating whether the ball intersects the "*three dimensional volume*" that represents the strike zone. (*Id.*) Thus, the file history refutes MLBAM's contention that the "three dimensional volume" is the strike zone.

The '530 Patent inventors further explained why the *Ellenby* patent did not invalidate that claim. (*See generally id.* at 15-36.) They explained that *Ellenby* is a handheld device that the user may look through and press a key to display a graphic of a “strike zone” near home plate based on an estimated location at which the user is directing the unit. (*See, e.g., id.* at 17.) Because the *Ellenby* strike zone graphic was a two dimensional graphic,<sup>3</sup> it was not defined in three dimensions. Accordingly, the inventors explained (and the Examiner agreed by allowing the claim) that *Ellenby* did not teach a “three dimensional volume representing a strike zone.” (*See generally id.* at 15-36.) Moreover, the inventors explained that the *Ellenby* graphic (which is two dimensional) is not a “three dimensional volume,” so it cannot determine if the ball intersects it.” (*Id.* at 17.) Therefore, the file history confirms that the “three dimensional volume” must be defined in three dimensions, but does not support MLBAM’s additional limitations.

## V. EXTRINSIC EVIDENCE SUPPORTS PLAINTIFFS’ CONSTRUCTION

Dr. Stevenson provided the only testimony in this matter of how a person of ordinary skill in the art would understand the term “three dimensional volume.”<sup>4</sup> He explained that “a three dimensional volume” could be calculated by creating a computer model with a coordinate system and using that model to define the three dimensional volume in a variety of ways, including (1) calculating the coordinates of the corners of the volume, (2) calculating lines outlining the dimension of the volume, or (3) providing voxels modeling the volume. (Dkt. 177-3, Tr. 47:20-50:1.) Claim 1 does not specify which, if any, of these methods (or some other method) must be

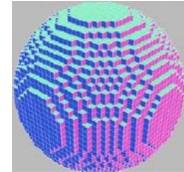
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<sup>3</sup> The '530 Patent inventors described the *Ellenby* graphic as a “graphic of a cube image.” Though a cube is a three-dimensional object, a “cube image” is a two-dimensional object drawn to look three-dimensional.

<sup>4</sup> MLBAM also relies on constructions involving phrases with the word “volume” in patents unrelated to the '530 Patent. (Dkt. 226 at 4-5.) Those constructions are equally or more supportive of Plaintiffs’ construction, but are completely irrelevant as they have different claim language, different specifications, and different file histories. *Phillips*, 415 F.3d at 1314.

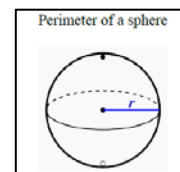
used to determine the “three dimensional volume.” In the preferred embodiment, the system first determines the location of the strike zone by adjusting lines on a video image to indicate where the batter’s knees and midsection are, and then calculates the dimensions of a “three dimensional box” using those locations and the dimensions of home plate. (’530 Patent at 2:52-3:8, Fig. 3.)

MLBAM discusses Dr. Stevenson’s explanation that the use of voxels is one way in which a three dimensional volume may be defined. For context, one might think of “voxels” as similar to Legos, except they exist only as a computer model. In its briefing, MLBAM uses an example of voxels being used to represent a sphere. (Dkt. 299 at 2.)



However, this example supports Plaintiffs’ construction and refutes MLBAM’s. As can be readily seen in the figure, the “three dimensional volume” is a space defined by the specifically arranged and shaped voxels in three dimensions. This is consistent with Plaintiffs’ construction. However, contrary to MLBAM’s unsupported assertion, the voxels do not occupy the same space as the sphere they represent. Rather, as can be readily seen in the figure, the three dimensional volume defined by the voxels in the computer model only “represents” a sphere; it is not the space occupied by the sphere. If it were, there would be no rough edges from the Lego-like voxels depicted in the diagram. Similarly, the “three dimensional volume representing a strike zone” in the ’530 Patent defines a space that “represents” the strike zone; but is not the strike zone.

MLBAM’s other example shows that a “three dimensional volume” may also be defined without voxels. (Dkt. 299 at 2.) This three dimensional volume is defined by its perimeter (*i.e.*, calculating the center and the radius), which defines a space that represents a sphere in the computer model, but the perimeter is not the sphere. This is similar to how the patent specification describes determining the three dimensional volume by defining the sides, top, and bottom of a box representing the strike zone. (’530 Patent at 3:21-28, Fig. 3.)



## **VI. THE COURT SHOULD RECOGNIZE THAT IT IS MLBAM THAT SEEKS TO REWRITE THE CLAIMS**

MLBAM's shifting positions are part of a transparent effort to create a non-infringement position for its accused products. MLBAM's products were designed to seamlessly replace Plaintiffs' patented PITCHf/x system, which was developed based on the technology disclosed in the '530 Patent. Because MLBAM's products are replacements for Plaintiffs' PITCHf/x systems, they not surprisingly infringe the '530 Patent. Hence, MLBAM attempts to rewrite "three dimensional volume" to suit its litigation purposes. MLBAM originally proposed a nonsensical, out-of-context meaning of "three dimensional volume" that was incompatible with the claim language (*i.e.*, "the amount of space occupied by a three dimensional object). Then, after that gambit failed, MLBAM now seeks to rewrite the claim to: (1) eviscerate the distinction between the three dimensional volume and the strike zone, (2) render the "representing" language superfluous, and (3) construe the claim such that it does not cover the preferred embodiment. Federal Circuit law precludes all three.

In contrast, Plaintiffs' construction has not substantively changed, and stays true to the scope of "three dimensional volume." As described above, Plaintiffs' definition is consistent with the "box" ('530 Patent at 3:21-28) and "zone" (*id.* at Fig. 3) described in the preferred embodiment. MLBAM's assertion that "zone" is "entirely unmoored from the intrinsic evidence" is belied by that disclosure. (Dkt. 229 at 10.) The only evidence before the Court about the understanding of those skilled in the art confirms that the "box" and "zone" described in the specification correspond to the "three dimensional volume."

## **VII. CONCLUSION**

For the reasons recited above and in Plaintiffs' original briefing, the plain and ordinary meaning of "three dimensional volume" is "space defined in three dimensions."

Date: June 11, 2021

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on June 11, 2021, I caused the foregoing **PLAINTIFFS SPORTVISION, INC. AND SPORTSMEDIA TECHNOLOGY CORPORATION'S RESPONSE TO DEFENDANT MLB ADVANCED MEDIA, L.P.'S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF REGARDING "THREE DIMENSIONAL VOLUME"** to be served on all parties in this action, as identified below, via electronic mail.

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